

In re: Kapik  
Serial No.: 10/678,827  
Filed: October 3, 2003  
Page 7 of 14

### REMARKS

Claims 1-31 are pending. Claim 12 is objected to because of an informality. Claim 12 has been amended as indicated above to correct the informality. Claims 25-31 are withdrawn.

Claims 1-2, 6 and 8 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,656,581 to Wu et al. ("Wu"). Claims 4-5, 7 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Wu. Claims 1-8 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,517,714 to Sneed et al ("Sneed") in view of U.S. Patent No. 5,711,994 to Powers ("Powers"). Claims 1-24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Powers or U.S. Patent Application No. 2003/0045193 to Snowden et al. ("Snowden") in view of Sneed.

Applicant respectfully traverses the rejections under 35 U.S.C. §102 and 35 U.S.C. §103 for at least the reasons set forth below.

In re: Kapik  
Serial No.: 10/678,827  
Filed: October 3, 2003  
Page 8 of 14

### §102 Rejections Are Overcome

A claim is anticipated under 35 U.S.C. §102 if each claimed element is found in a single prior art reference. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991); *Carella v. Starlight Archery and Pro Line Co.*, 804 F.2d 135, 138 (Fed. Cir. 1986). There must be no difference between the claimed invention and the reference disclosure, as viewed by an ordinary artisan. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d at 1576.

Applicant's Claim 1 recites a method of preparing a barrier fabric, comprising:

- providing a web of nonwoven material including at least one meltblown nonwoven layer, wherein the web has a lengthwise direction and a widthwise direction;
- applying a barrier finish to the web such that the web serves as a barrier to liquids;
- stretching the web in the widthwise direction without hindering barrier properties of the web; and
- subjecting the web to conditions sufficient to cure the barrier finish.

With respect to Claim 1, the Action states that Wu discloses a method of providing a web of nonwoven material, applying a barrier finish to the web, stretching the web in the cross-machine direction and subjecting the coated nonwoven web to both cooling and heating to cure the barrier finish. The Action cites a single passage for its rejection of Claim 1 (Col. 7, Lines 3-19). This passage is set forth below in its entirety:

The nonwoven fibrous web may comprise fibers of polyethylene, polypropylene, polyesters, rayon, cellulose, nylon, and blends of such fibers. A number of definitions have been proposed for nonwoven fibrous webs. The fibers are usually staple fibers or continuous filaments. The nonwovens are usually referred to as spunbond, carded, meltblown, and the like. The fibers or filaments may be bicomponent to facilitate bonding. For example, a fiber having a sheath and core of different polymers such as polyethylene (PE) and polypropylene (PP) may be used; or mixtures of PE and PP fibers may be used. As used herein "nonwoven fibrous web" is used in its generic sense to define a generally planar structure that is relatively flat, flexible and porous, and is composed of staple fibers or continuous filaments. For a detailed description of nonwovens, see "Nonwoven Fabric Primer and Reference Sampler" by E. A. Vaughn, Association of the Nonwoven Fabrics Industry, 3d Edition (1992). (Wu, Col. 7, Lines 3-19).

In re: Kapik  
Serial No.: 10/678,827  
Filed: October 3, 2003  
Page 9 of 14

Clearly, there is no disclosure of applying a barrier finish to a nonwoven web in this passage. Moreover, there is no disclosure of curing a barrier finish in this passage, and there is no disclosure of stretching a nonwoven web in the widthwise direction *after* having a barrier finish applied thereto, and without hindering barrier properties of the web. For the record, there is no disclosure *anywhere* in Wu of applying a barrier finish to a nonwoven web and/or curing the barrier finish, and/or stretching a nonwoven web with a barrier finish in the widthwise direction without hindering barrier properties of the web. Wu is directed to producing stretched, microporous *films* and laminates comprised of nonwoven webs and stretched microporous *films*. Such films are not a barrier finish as recited in the claims of the present invention. Thus, Wu does not teach or suggest applying a barrier finish to a nonwoven web of material, stretching the web in the widthwise direction without hindering the barrier properties of the web, and then subjecting the web to conditions sufficient to cure the barrier finish. Clearly, to the ordinary artisan, there is substantial difference between the recitations of Claim 1 and the films and laminates of Wu.

Because Wu fails to disclose all of the recited elements of independent Claim 1, independent Claim 1, and all claims depending therefrom, are not anticipated by Wu. As such, the rejections under 35 U.S.C. §102 are overcome.

In re: Kapik  
Serial No.: 10/678,827  
Filed: October 3, 2003  
Page 10 of 14

### §103 Rejections Are Overcome

A determination under §103 that an invention would have been obvious to someone of ordinary skill in the art is a conclusion of law based on fact. *Panduit Corp. v. Dennison Mfg. Co.* 810 F.2d 1593, 1 U.S.P.Q.2d 1593 (Fed. Cir. 1987), *cert. denied*, 107 S.Ct. 2187. After the involved facts are determined, the decision maker must then make the legal determination of whether the claimed invention as a whole would have been obvious to a person having ordinary skill in the art at the time the invention was unknown, and just before it was made. *Id.* at 1596. The United States Patent and Trademark Office (USPTO) has the initial burden under § 103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988).

To establish a *prima facie* case of obviousness, the prior art reference or references when combined must teach or suggest *all* the recitations of the claims, and there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. M.P.E.P. § 2143. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. M.P.E.P. § 2143.01(citing *In re Mills*, 916 F.2d 680, 16 U.S.P.Q.2d 1430 (Fed. Cir. 1990)). As emphasized by the Court of Appeals for the Federal Circuit, to support combining references, evidence of a suggestion, teaching, or motivation to combine must be **clear and particular**, and this requirement for clear and particular evidence is not met by broad and conclusory statements about the teachings of references. *In re Dembiczak*, 50 U.S.P.Q.2d 1614, 1617 (Fed. Cir. 1999). In an even more recent decision, the Court of Appeals for the Federal Circuit has stated that, to support combining or modifying references, there must be **particular** evidence from the prior art as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed. *In re Kotzab*, 55 U.S.P.Q.2d 1313, 1317 (Fed. Cir. 2000).

Furthermore, as recently stated by the Federal Circuit with regard to the selection and combination of references:

This factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining

In re: Kapik  
Serial No.: 10/678,827  
Filed: October 3, 2003  
Page 11 of 14

whether a person of ordinary skill would have been led to this combination of references, simply to "[use] that which the inventor taught against its teacher." W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). Thus the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency's conclusion....

*In re Sang Su Lee*, 277 F.3d 1338, 1343 (Fed. Cir. 2002).

As set forth in Applicant's specification, during fabrication, barrier fabrics are conventionally "necked" or "reversibly necked" to soften the material. (Applicant's Specification, Pages 1-2). These processes involve stretching the fabric in the machine direction (*i.e.*, elongated, lengthwise direction) and then letting the material recover to the original width. These processes are careful to impart stretch *only* along the lengthwise direction (also referred to as the "machine direction") of a fabric. Stretching of the fabric in a widthwise direction (also referred to as "cross direction") via conventional methods of production has been avoided because traditionally it degrades the barrier characteristics of the fabric. None of the references cited by the Action teach or suggest how to overcome the problem of degradation to the barrier properties of a fabric having a barrier finish thereon that is stretched in the cross direction. Specifically, none of the references teaches or suggests stretching a nonwoven web that has a barrier finish applied thereon without hindering barrier properties of the web.

Wu describes non-embossed *film* products that have high moisture vapor transmission rates (MVTRs). As stated in Wu:

It is the primary objective of this invention to produce an incrementally stretched non-embossed film having a high MVTR greater than about 2000 gms/m<sup>2</sup>/day to about 4500 gms/m<sup>2</sup>/day at about 95% relative humidity (RH) at 100° F (according to ASTM E96E). It is the further objective to produce such a microporous film and laminated products thereof with nonwoven fibrous webs on high-speed production machinery. (Wu, Col. 4, Line 65 - Col. 5, Line 6).

Wu does not teach or suggest first applying a barrier finish to a nonwoven web of material, and then stretching the web in the widthwise direction without hindering the barrier properties of the web, and then subjecting the web to conditions sufficient to cure the barrier finish. As discussed above with respect to the rejections under §102, the Action fails to

In re: Kapik  
Serial No.: 10/678,827  
Filed: October 3, 2003  
Page 12 of 14

provide cites to any passages in Wu that teach or suggest the recitations of independent Claim 1 (*i.e.*, applying a barrier finish to the web such that the web serves as a barrier to liquids, stretching the web in the widthwise direction without hindering barrier properties of the web, and subjecting the web to conditions sufficient to cure the barrier finish). Moreover, to the ordinary artisan, there is substantial difference between the recitations of Claim 1, which are directed to stretching a nonwoven web having a barrier finish thereon, and the stretching of webs having films thereon, as described by Wu. A film is *not* a barrier finish. Because independent Claim 1 is patentable over Wu, Claims 4-5, 7 and 24, which depend from Claim 1, are also patentable. Accordingly, Applicant respectfully requests withdrawal of the present rejections under 35 U.S.C. §103.

The Action states that Claims 1-8 and 24 are unpatentable over Sneed in view of Powers. Sneed describes a process for making a nonwoven fabric barrier layer by simultaneously ring-rolling to the desired basis weight at least two adjacent plies of hydrophobic microfine fiber webs. The web plies of Sneed are stretched and enmeshed with each other while passing between the interdigitating rolls and are, thus, bonded together to produce a barrier layer. The web plies of Sneed do not have a barrier finish applied thereto prior to being stretched and enmeshed with each other via the interdigitating rolls. In fact, the Action concedes that Sneed does not teach applying a barrier finish to a web. (Action, Page 4). Accordingly, Sneed fails to teach or suggest applying a barrier finish to a web of nonwoven material and then stretching the web in the widthwise direction without hindering barrier properties of the web.

Powers describes subjecting one or both sides of a nonwoven to an atomized spray of neat or nearly neat treating composition under controlled conditions of a generally uniform atomized atmosphere. According to Powers, drying and its deleterious effects are essentially or completely unnecessary, and the process provides means to uniformly treat one or both sides of the nonwoven to a desired degree. (Powers, Col. 1, Lines 55-65). The Action states that Powers is cited for its teaching of applying finishing compositions to a nonwoven multilayer composite, followed by curing in a drying station. The Action then concludes that it would have been obvious to one having ordinary skill in the art to have treated the nonwoven barrier fabric of Sneed with finishing compositions taught by Powers in order to

In re: Kapik  
Serial No.: 10/678,827  
Filed: October 3, 2003  
Page 13 of 14

render Sneed's fabric antistatic and repellent and because Powers states "the present invention is suitable for treating nonwovens broadly". (Action, Page 4).

Powers fails to teach or suggest a nonwoven web having a barrier finish thereon that is then stretched in the widthwise direction without hindering barrier properties of the web. In fact, there is no disclosure anywhere in Powers regarding applying barrier finishes to nonwoven webs. Moreover, there is no disclosure anywhere in Powers regarding stretching, in a cross direction, nonwoven webs that have barrier finishes applied thereto. The combination of Powers and Sneed fails to teach or suggest stretching, in the widthwise direction, a nonwoven web having a barrier finish thereon without hindering the barrier properties of the web. Moreover, the Action has failed to set forth any clear and particular evidence as to how one skilled in the art would arrive at Applicant's claimed invention based on the combination of Powers and Sneed. As such, the combination of Powers and Sneed fails to teach or suggest the recitations of Applicant's Claim 1. Accordingly, Applicant respectfully requests withdrawal of the present rejections under 35 U.S.C. §103.

The Action states that Claims 1-24 are unpatentable over Powers or Snowden, taken in view of Sneed. Snowden describes a two-step process for treating lightweight nonwovens to impart single-sided anti-static and alcohol repellency properties while maintaining good barrier characteristics as measured by hydrostatic head values. (Snowden, Paragraph 0004). Snowden fails to teach or suggest stretching, in a widthwise direction, a nonwoven web that has a barrier finish thereon while maintaining barrier properties of the web. In fact, there is no disclosure anywhere in Snowden regarding stretching a nonwoven web.

As discussed above, Powers fails to teach or suggest a nonwoven web having a barrier finish thereon that is then stretched in the widthwise direction without hindering barrier properties of the web. In fact, there is no disclosure anywhere in Powers regarding applying barrier finishes to nonwoven webs.

Accordingly, because Sneed fails to teach or suggest stretching webs having barrier finishes thereon, neither the combination of Snowden and Sneed nor the combination of Powers and Sneed teaches or suggests the recitations of Applicant's independent Claim 1 and independent Claim 9. Moreover, no clear and particular evidence has been set forth as to

In re: Kapik  
Serial No.: 10/678,827  
Filed: October 3, 2003  
Page 14 of 14

why Powers or Snowden would lead one skilled in the art to modify Sneed to be concerned about stretching a web having a barrier finish thereon without hindering the barrier properties of the web. Accordingly, Applicant respectfully requests withdrawal of the present rejections under 35 U.S.C. §103.

In view of the above, it is respectfully submitted that this application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,

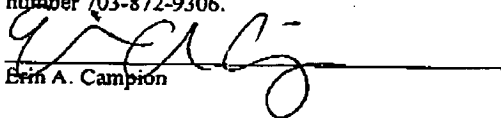


Needham James Boddie, II  
Attorney for Applicant  
Registration No. 40,519

USPTO Customer No. 20792  
Myers Bigel Sibley & Sajovec, P.A.  
Post Office Box 37428  
Raleigh, North Carolina 27627  
Telephone: (919) 854-1400  
Facsimile: (919) 854-1401  
Doc. No. 399548

**CERTIFICATION OF FACSIMILE TRANSMISSION UNDER 37 CFR § 1.8**

I hereby certify that this correspondence is being transmitted by facsimile to the U.S. Patent and Trademark Office, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on November 12, 2004 via facsimile number 703-872-9306.



Erin A. Campion